External Independent Peer Review of the Comparative Analysis of U.S. Federal Fishery Management to the FAO Ecolabelling Guidelines

By

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Executive Summary

The management of US fisheries is not perfect. But in the context of the FAO Guidelines for Ecolabelling, it meets by and large most of the criteria. This is not only a reflection of the role the USA played in developing the guidelines, but it is also a testimony to the balanced involvement of industry and environmental NGOs in the policy development and implementation of fisheries management in the USA.

The collection of adequate / reliable data, however, is one area where the USA fisheries management has lagged in some areas. The Northeast has been exemplary in the collection of fishery independent data, while the Northwest and Alaska, since extension of jurisdiction have been exemplary in the collection of fishery dependent data. Both regions are making progress on their weaknesses, but the Northwest and Alaska seem to be progressing more quickly on improving the collection of fishery independent data than the northeast is in the collection of fishery dependent data.

The southern areas are also making progress in both areas, but data collection programs designed for large scale commercial fisheries may not be appropriate for areas where small scale commercial and recreational fisheries dominate.

Background

NMFS has developed a methodology based on the FAO Ecolabelling Guidelines to assess the sustainability of a fishery management system and has applied the methodology to U.S. federal marine fishery management. CIE reviewers were asked to conduct an independent assessment of the U.S. federal marine fishery management system using the methodology provided. This assessment can act as a tool for NMFS to systematically document, communicate, and guide the sustainable management of U.S. federal fisheries. NMFS leadership believes that an independent assessment would be valuable for describing evidence of conformance between U.S. fishery intentions and performance, and the FAO Ecolabelling Guidelines.

Description of the Individual Reviewer's Role in the Review Activities

I have reviewed the two documents provided and the FAO Ecolabelling Guidelines. I prepared a detailed table (as described by Table 3 in Framework Assessment of Sustainability) documenting evidence of intention, performance, and independent verification of U.S. federal marine fishery management conformance and I compiled ratings for all 24 Topics of Pertinence into one summary sheet (as described by Table 1 template in Framework Assessment of Sustainability).

The ratings in the column "independent" of the self-assessment comparative analysis included, among other things, citations from published sources. Where I agreed with the sources, I included them. Where I did not, that column includes my own assessment, not necessarily with reference to any published source.

Summary of Findings for each ToR in which the weaknesses and strengths are described

1. Generate a table (as described by Table 3 in Framework Assessment of Sustainability) documenting evidence of intention, performance, and independent verification of U.S. federal marine fishery management conformance.

i. In assessing intentions (i.e., internal evidence), the document of example statutes and regulations provided (in the pre-review background documents) may serve as the basis for conformance evidence. Additional legislative and regulatory evidence may also be provided per the reviewer's knowledge and expertise.

ii. In assessing performance (i.e., outcome evidence) and independent verification (i.e., independent evidence), examples shall be derived from the reviewer's knowledge and expertise of the U.S. federal marine fishery management system.

The tables covering ToR 1 and 2 follow, with reference for the tables at the end of the tables.

Topic of pertinence # 1 (28): **Management system is in compliance with relevant local, national and international law**			
Type of evidence	**Internal**	**Outcome**	**Independent**
Symbol rating	●	●	●
Description	The Magnuson-Stevens Fishery Conservation and Management Act (MSA) specifically requires that fishery management plans need to be compliant with relevant local, national and international law. Similarly, in the Endangered Species Act (ESA), the USA agrees to follow international agreements.	Fishery management plans compliant with the MSA are produced by Regional Fishery Management Councils, agreed by NOAA and implemented. The entire US management process is open and transparent with public participation at every step.	Fishery management decisions have been challenged by Environmental Non-Governmental Organisations (ENGOs) and by the fishing industry in the judicial systems and can continue to be challenged. Court of Justice decisions have been implemented.

Topic of pertinence # 2 (28.1; 32): **There are documented management approaches for the "stock under consideration"**			
Type of evidence	**Internal**	**Outcome**	**Independent**
Symbol rating	●	●	●
Description	The MSA specifically requires that regional fishery management councils prepare a fishery management plan for each fishery under its authority that requires conservation and management. Similarly, the MSA requires the development and implementation of recovery plans for the conservation and survival of endangered, threatened and protected species.	Fishery management plans have been produced by regional fishery management councils and recovery plans have been prepared for endangered, threatened, and protected species.	The documented management approaches are detailed in fishery management plans and recovery plans for federally managed stocks can be viewed publically via the NOAA Fisheries website.

Topic of pertinence # 3 (28.1; 29.6; 30.4; 31; 31.4; 32): **Uncertainty taken into account via risk assessment or precautionary approach**			
Type of evidence	**Internal**	**Outcome**	**Independent**
Symbol rating	●	●	●
Description	National Standard 1 Guidelines specifically require Councils to "*take an approach that considers uncertainty in scientific information and management control of the fishery*" National Standard 6 Guidelines states that "*Allowances for uncertainties should be factored into the various elements of an (Fishery Management Plan).*" National Standard 9 Guidelines further state that *"Councils should adhere to the precautionary approach… when faced with uncertainty…*"	Stock assessments documents generally explicitly show confidence intervals. Scientists identify an Overfishing Limit (OFL), and taking into account the uncertainty in the assessment, an Acceptable Biological Catch (ABC). Management Councils set Annual Catch Limits (ACL) taking into account management uncertainty.	Precaution is explicitly enshrined in U.S. fisheries legislation, and is applied to fisheries management plans. Most quantitative stock assessment that I have reviewed in the USA explicitly include the evaluation of uncertainty. Numerous stock assessment reviews by the Center for Independent Experts confirm this observation.

Topic of pertinence # 4 (31.3; 31.4): **Ecosystem effects of fishing are assessed and adverse effects addressed**			
Type of evidence	**Internal**	**Outcome**	**Independent**
Symbol rating	●	●	●
Description	The Magnuson-Stevens Fishery Conservation and Management Act seeks to "…*minimize to the extent practicable adverse effects on such habitat caused by fishing…*" National Standard 1 Guidelines states that defining Optimum Yield should take account of "impacts *on ecosystem component species, forage fish stocks, other fisheries, predator-prey or competitive interactions, marine mammals, threatened or endangered species, and birds*." The Marine Mammal Protection Act states that if commercial fisheries are " *likely to result in an impact that is more than negligible on the endangered or threatened species or stock, the Secretary shall use the emergency authority… to protect such species or stock…*" The Endangered Species Act states that "*… if an endangered species or threatened species of a marine*	Techniques implemented among the regions to address pertinent aspects of the ecosystem effects of fishing include gear restrictions to reduce bycatch, marine debris (e.g., derelict fishing gear) and habitat destruction, and time and area closures. · Environmental impact statements and environmental assessments are mandated by NEPA.	In 2004, the Center for Independent Experts reviewed NOAA Fisheries evaluation of fishing activities that may adversely affect essential fish habitat in the Alaska Region (CIE, 2004). Vasconcellos et. al. (2006) found that most fishery impacts on biodiversity are assessed and mitigated for in U.S. federal fishery management plans Bartram et al., 2008 and Bartram and Kaneko, 2009 citing Sibert et al., 2006 found that "*Comprehensive estimates of fishery impacts on pelagic fish population biomass and size structure, through analysis of all available data from Pacific tuna fisheries (including multi-national longline fisheries) for 1950-2004, indicate relatively minor impacts on the pelagic ecosystem in the Pacific Ocean*". "Ecosystem effects" is a very broad term that encompasses many factors (biodiversity,

	mammal is involved … the Secretary shall provide … a written statement that— (i) specifies the impact of such incidental taking on the species, (ii) specifies those reasonable and prudent measures that the Secretary considers necessary or appropriate to minimize such impact…" and the applicant has to submit "*to the Secretary a conservation plan that specifies— (i) the impact which will likely result from such taking; (ii) what steps the applicant will take to minimize and mitigate such impacts…*" The National Environmental Policy Act requires federal entities to "*…include in every recommendation or report on proposals for legislation and other major Federal actions… (i) the environmental impact of the proposed action, (ii) any adverse environmental effects which cannot be avoided should the proposal be implemented …*"		habitat, food-web, bycatch, etc.) and, while a comprehensive, independent assessment of all U.S. federal marine fisheries has yet to be conducted, the USA is well ahead of the game in taking ecosystem effects into consideration in fisheries management.

Topic of pertinence # 5 (29; 31; 32): **Types and scales of fisheries considered in management**			
Type of evidence	**Internal**	**Outcome**	**Independent**
Symbol rating	●	●	●
Description	The Magnuson-Stevens Fishery Conservation and Management Act states that "*Conservation and management measures shall take into account and allow for variations among, and contingencies in, fisheries, fishery resources, and catches.*" This is interpreted as meaning that the types and scales of fisheries should be considered in fisheries management. National Standard 6 Guidelines state that "*The particular* [management] *regime chosen must be flexible enough to allow timely response to resource, industry, and other national and regional needs.* [...] *Flexibility in the management regime and the regulatory process will aid in responding to contingencies.*" The Regulatory Flexibility Act states that "*…the agency shall prepare and make available for public comment an*	Fishery management plans are adapted to the types and scales of fisheries. Regulatory Flexibility Act analyses are routinely produced. Some examples of fishery management council decisions include: "*50-75 nautical mile longline fishing exclusion areas have been established around the main Hawaiian Islands to protect the interests of small-scale troll and handline fishermen*" in the Fisheries of the Western Pacific Region fishery management plan – Amendment 5 – 1991). "*Large vessel closed areas protect the interests of small-scale fishermen in American Samoa. Vessels longer than 50 ft. are prohibited from fishing for pelagic fish in specific areas around Tutuila, Manu`a Islands, Rose Atoll and Swains Island to prevent gear conflict between different sized vessels*" in regulations for large vessel closed areas in nearshore	Pitcher et al., 2006; state that "*US fisheries management plans provide for stakeholders' participation in determining management decisions and address the interests of small-scale fishers. Regional Fishery Management Councils do include small-scale fisheries groups*"; Vasconcellos et al., 2006 state that "*…institutional structures for ongoing consultation…small-scale fisher's opinions are…included in plans.*" Taking into account the types and scales of the fisheries in fisheries management does not imply a redistribution of access rights to smaller operators, it is intended to treat fairly all operators involved at the time that management is implemented.

	initial regulatory flexibility analysis. Such analysis shall describe the impact of the proposed rule on small entities"; "Each final regulatory flexibility analysis shall contain…a description of the steps the agency has taken to minimize the significant economic impact on small entities…"	waters around American Samoa, revised March 15, 2002.). The Community Development Quota programs (e.g., Western Alaska)	

Topic of pertinence # 6 (29.1; 29.3; 31; 32): **Adequate / reliable data are collected, maintained and assessed**			
Type of evidence	**Internal**	**Outcome**	**Independent**
Symbol rating	●	◒	◒
Description	The provisions of the Magnuson-Stevens Fishery Conservation and Management Act require that fishery management plans specify the pertinent data *with respect to commercial, recreational, charter fishing, and fish processing in the fishery…*" National Standard 2 Guidelines state that "*Successful fishery management depends, in part, on the timely availability, quality, and quantity of scientific information*"; and that fisheries management plans "*should identify scientific information needed from other sources to improve understanding and management of the resource, marine ecosystem, and the fishery (including fishing communities*)." The Endangered Species Act states that "*The Secretary shall make determinations ...solely on the basis of the best scientific and commercial data available to him after conducting a review of the status of the species…*"	Stock assessment and Fishery management plans describe the data that are collected and used in the fisheries management process. This includes logbooks, report from observer programs. For some fisheries the collection of standard fisheries data is not feasible given constraints due to the size or scale of the fishery. Management approaches should be tailored to the type and quantity of data that are available as suggested in the FAO Guidelines.	The Scientific and Statistical Committees of the regional fishery management councils and/or the Center for Independent Experts comments on the adequacy and reliability of the data when they review stock assessments. The collection of adequate / reliable data is one area where the USA fisheries management has lagged. The Northeast has been exemplary in the collection of fishery independent data, while the Northwest and Alaska have been exemplary in the collection of fishery dependent data. Both regions are making progress on their weaknesses. The southern areas are also making progress in both areas, but data collection programs designed for large scale commercial fisheries may not be appropriate for areas where small scale commercial and recreational fisheries dominate.

Topic of pertinence # 7 (29.1; 29.2; 29.3; 31): **Traditional, fisher or community knowledge considered**			
Type of evidence	**Internal**	**Outcome**	**Independent**
Symbol rating	●	◒	◒
Description	The Magnuson-Stevens Fishery Conservation and Management Act requires that voting members be " *individuals who, by reason of their occupational or other experience, scientific expertise, or training, are knowledgeable regarding the conservation and management, or the commercial or recreational harvest, of the fishery resources of the geographical area concerned.*" This can be taken as covering traditional, fisher or community knowledge. Executive Order 13175 is more specific: "*Each agency shall have an accountable process to ensure meaningful and timely input by tribal officials in the development of regulatory policies that have tribal implications.*"	Council, committees, and advisory panel membership is an attempt to cover this point. In addition, there are public comment sessions at Council meetings. Some specific projects are also trying to address this issue, e.g. the Northeast oral history project, Local Fisheries Knowledge Projects, and the Economic and Social Sciences Research Program at the Alaska Fisheries Science Center	The meetings of the regional fishery management Councils are open to the public and there are periods for public comments. However, the main basis for decision making by the management councils is the formal scientific advice. There are no formal mechanisms for including traditional, fisher or community knowledge in the scientific process. It is an add-on once the scientific advice has been produced and reviewed.

Topic of pertinence # 8 (29.2; 29.3; 29.6; 31): **Best scientific evidence used in management measures**			
Type of evidence	**Internal**	**Outcome**	**Independent**
Symbol rating	●	●	●
Description	The Magnuson-Stevens Fishery Conservation and Management Act require that "*Conservation and management measures shall be based upon the best scientific information available.*" National Standard 2 Guidelines goes further in requiring that fisheries management plans "*must demonstrate that the best scientific information available was used…*" The Endangered Species Act, in the basis for determination requires that "*The Secretary shall make determinations…solely on the basis of the best scientific and commercial data available…"; "The Secretary shall designate critical habitat…on the basis of the best scientific data available…*"	The use of the best scientific evidence is documented in stock assessment documents and in fisheries management plans. In addition, when compiling data on the status of U.S. Fisheries, NOAA's Office of Sustainable Fisheries requests a declared affirmation from Councils' Scientific and Statistical Committees asserting that they have considered the best scientific information available in their stock assessments.	Regional fishery management councils have established peer review mechanisms (e.g. SARC, SEDAR, STAR, WPSAR) to ensure that stock assessments for fisheries by NOAA are using the best scientific evidence. In addition, the Council's Scientific and Statistical Committee provide another mechanism to ensure that the best scientific information is used. Most of the peer review mechanisms have multistage processes in the preparation of assessments, e.g. a data workshop, an assessment workshop and a peer review workshop. While there are several mechanism to ensure that the best available scientific data are used, there are much fewer mechanisms to verify if the data are good enough (fit for purpose). This, however, is not a widespread problem.

Topic of pertinence # 9 (29.2 bis): **Total fishing mortality from all sources considered for the "stock under consideration"**			
Type of evidence	**Internal**	**Outcome**	**Independent**
Symbol rating	●	●	●
Description	The Magnuson-Stevens Fishery Conservation and Management Act states that fishery management plans may establish measures to incorporate bycatch into quotas. National Standard 1Guidelines defines catch as the total quantity of fish, and National Standard 9 Guidelines ask for evaluation of total fishing mortality.	Stock assessments workshops go to considerable length to include all catches and estimate total fishing mortality. A recent example is the SARC 59 Gulf of Maine haddock assessment where considerably effort was spent trying to estimate recreational discards.	Stock assessments for NOAA managed fisheries are reviewed by regional panels of independent experts (e.g., SARC, SEDAR, STAR, WPSAR), and then by a Council's Scientific and Statistical Committee. Independent experts are involved through the Center for Independent Experts.

Topic of pertinence # 10 (29.2 bis; 32): **Maximum sustainable yield or proxy used for management targets**			
Type of evidence	**Internal**	**Outcome**	**Independent**
Symbol rating	●	●	●
Description	The provisions of Magnuson-Stevens Fishery Conservation and Management Act specifically require that fisheries management plans specify MSY. In addition, "*Each scientific and statistical committee shall provide its Council ongoing scientific advice for fishery management decisions, including recommendations for …maximum sustainable yield…*" The Marine Mammal Protection Act also calls for a form of MSY: "*The term 'potential biological removal level' means the maximum number of animals, not including natural mortalities, that may be removed from a marine mammal stock …*"	MSY or proxy numerical values are included in fishery management plans and in stock assessments documents.	Estimates of MSY and MSY proxies are vetted in regional stock assessments processes in which independent experts from the Center for Independent Experts are involved and approved by a Council's Scientific and Statistical Committee. The regional stock assessment processes are open to public participation. In addition, any management measure within the management plan is subject to public comment and the public itself can independently review and provide comments to Councils regarding maximum sustainable yield specifications in fishery management plans before approval by the Secretary of Commerce. It should be noted, however, that there is a tendency in most stock assessment review processes to choose conservative proxies for MSY instead of attempting to calculate MSY.

Topic of pertinence # 11 (29.2 bis; 32): **Optimal utilisation is promoted in management**			
Type of evidence	**Internal**	**Outcome**	**Independent**
Symbol rating	●	◒	◒
Description	The Magnuson-Stevens Fishery Conservation and Management Act states that "*Conservation and management measures shall prevent overfishing while achieving, on a continuing basis, the optimum yield from each fishery for the U.S. fishing industry.*" Optimal yield implies optimal utilisation as understood in the FAO Guidelines.	Overfishing limits (OFL) Allowable Biological Catch (ABC) and Annual Catch Limits (ACL) are proposed in stock assessment documents. Councils Scientific and Statistical Committees uses these to advise ABC taking stock assessment uncertainty into account and Fishery management councils set ACL taking management uncertainty into account. In reality, because conservative proxies are used, and because conservation of the resource takes precedence on optimal utilisation, allowable catches cannot always be taken due to "choke" species limiting the ability to catch more abundant species.	The assessment and specification of optimum yield is included in some regional stock assessments processes. Because conservative proxies are used, and because conservation of the resource takes precedence on optimal utilisation, allowable catches cannot always be taken due to "choke" species limiting the ability to catch more abundant species.

Topic of pertinence # 12 (29.2 bis; 31.2): **Food-web ecosystem considerations taken into account**			
Type of evidence	**Internal**	**Outcome**	**Independent**
Symbol rating	●	●	●
Description	National Standard 1 Guidelines state that: "*Councils must also describe fisheries data for the… ecosystem component species in their (Fishery Management Plans)…"; "The benefits of protection afforded to marine ecosystems are those resulting from… maintaining adequate forage for all components of the ecosystem …"; "Factors to consider in (Optimum Yield) specification … Examples include impacts on ecosystem component species, forage fish stocks, other fisheries, predator-prey or competitive interactions…*" CFR 50-VI-600.815, which details the contents of fisheries management plans, states: "*Ecological relationships among species and between the species and their habitat require, where possible, that an ecosystem approach be used in determining the (Essential Fish Habitat) of a managed species";*	Fishery ecosystem plans have been or are being prepared. Other fisheries management plan include food web considerations, e.g. the Pacific Council's Coastal Pelagic Species fishery management plan prohibits the harvest of krill (a forage species), the North Pacific Council amended the Gulf of Alaska and Bering Sea/Aleutian Islands Groundfish management plans to preclude directed fishing on over 20 important forage species. In annual Stock Assessment and Fishery Evaluation Reports, the North Pacific Council's Groundfish Plan Teams prepare separate Ecosystem Considerations sections, which include descriptors of forage fish Fishery closure areas around some rookies to protect Steller sea lion foraging areas in the Bering Sea/Aleutian Islands NOAA's Pacific Fisheries Science Center, Fishery	Pitcher et al., 2009 found that the United States exhibited a 'good' performance rating for publishing principles, establishing indicators, and implementing ecosystem-based management. It scored highest of 33 countries regarding setting ecosystem-based management principles. A World Wildlife Fund independent review acknowledged that ecosystem-based management science, policy, and data are being developed in the U.S. for marine capture fisheries (Grieve and Short, 2007). While improvements are certainly possible, the USA, along with fisheries in the North Sea, Baltic Sea and Barents Sea, is leading pack in incorporating food web considerations in assessment and management.

	"(Fishery Management Plans) should list the major prey species for the species in the fishery management unit and discuss the location of prey species' habitat." The Endangered Species Act state that "*The Secretary shall… determine whether any species is an endangered species or a threatened species because of… predation…"; "The Secretary shall make determinations…to protect such species, whether by predator control, protection of …food supply…*" Food-web considerations are generally included within the broader category of ecosystem considerations. When overtly discussed in regards to fisheries management, the provisions tend to be discretionary (e.g., "should" versus of "shall")	Biology and Stock Assessment Division, conducts diet and food web modeling for a variety of federally managed species. Estimates of predations are included in several stock assessment conducted by the NEFSC.	

Topic of pertinence # 13 (29.2 bis; 29.6; 30; 30.1; 30.2; 31.1): **Management should specify limits or direction in key performance indicators, e.g. overfishing**			
Type of evidence	**Internal**	**Outcome**	**Independent**
Symbol rating	●	●	●
Description	The Magnuson-Stevens Fishery Conservation and Management Act requires that each fisheries management Council develop annual catch limits for each of its managed fisheries not exceeding the fishing the recommendations of its scientific and statistical committee or the peer review process. Any fishery management plan shall establish a mechanism for specifying annual catch limits or annual specifications, such that overfishing does not occur in the fishery. "*Each scientific and statistical committee shall provide its Council ongoing scientific advice for fishery management decisions, including recommendations for acceptable biological catch, preventing overfishing, maximum sustainable yield, and achieving rebuilding targets…*"; National Standard 1 Guidelines state "*Status determination criteria (SDC) mean the quantifiable*	Fishery management plans, Recovery plans, Fish Stock Sustainability Index, Status of Stocks Report (to Congress) all document the actions taken in specifying limits or directions in key performance indicators and in monitoring progress in avoiding limits and reaching targets.	To my knowledge, the USA is where the use of performance indicators is the most widespread, the most systematically designed and the most rigorously implemented.

	factors, MFMT (Maximum Fishing Mortality Threshold), OFL (Over Fishing Limit), and MSST (Minimum Stock Size Threshold), or their proxies, that are used to determine if overfishing has occurred, or if the stock or stock complex is overfished." The Marine Mammal Protection Act states that "*The term 'potential biological removal level' means the maximum number of animals, not including natural mortalities, that may be removed from a marine mammal stock while allowing that stock to reach or maintain its optimum sustainable population*" The Endangered Species Act state that "*… The Secretary shall develop and implement (recovery) plans… and… incorporate in each plan—…measurable criteria which, when met, would result in a determination…that the species be removed from the list…*"		

Topic of pertinence # 14 (29.2 bis; 29.6; 30.2): **Actions taken if limits approached or exceeded**			
Type of evidence	**Internal**	**Outcome**	**Independent**
Symbol rating	●	●	●
Description	The provisions of the Magnuson-Stevens Fishery Conservation and Management Act required that "*Any fishery management plan…shall… establish a mechanism for specifying annual catch limits in the plan… including measures to ensure accountability.*" National Standard 1 states "*…if an (Annual Catch Limit) is exceeded for a year, then (Accountability Measures) are triggered for the next year…";" (Accountability Measures) are management controls to prevent (Annual Catch Limits)…from being exceeded, and to correct or mitigate overages of the (Annual Catch Limits) if they occur*"; The Marine Mammal Protection Act states that "*If…the level of incidental mortality or serious injury from commercial fisheries … is likely to result in an impact that is more than negligible on the endangered or threatened species or*	Accountability measures are included in fishery management plans to ensure that Annual Catch Limits are not exceeded. Rebuilding plans for overfished stocks are developed. Take reduction plans for marine mammals are established. List of Fisheries categorization and mitigation measures for incidental mortality and serious injury to marine mammals occurring in each fishery are prepared. Recovery plans for threatened or endangered species are developed and implemented.	To my knowledge, the USA is where the use of performance indicators is the most widespread, the most systematically designed and the most rigorously implemented. Immediate and automatic action is triggered when limits are approached or exceeded. If actions are not taken when limits are approached exceeded, the U.S. judiciary system (generally via non-governmental organization lawsuit against NOAA Fisheries) acts as a third-party, independent expert that evaluates whether accountability measures or other actions were appropriately taken as required if limits are exceeded.

	stock, the Secretary shall use the emergency authority to protect such species or stock…" The Endangered Species Act protective regulations require that "*Whenever any species is listed as a threatened species pursuant to subsection (c) of this section, the Secretary shall issue such regulations as he deems necessary and advisable to provide for the conservation of such species. The Secretary may by regulation prohibit with respect to any threatened species any act…*"		

Topic of pertinence # 15 (29.4; 30): **Goal of long-term sustainability present**			
Type of evidence	**Internal**	**Outcome**	**Independent**
Symbol rating	●	●	●
Description	Under definitions, the Magnuson-Stevens Fishery Conservation and Management Act states that "*conservation and management refers to all of the rules, regulations, conditions, methods, and other measures… to assure that…there will be … options available with respect to future uses of the resources*"; "*Conservation and management measures shall prevent overfishing while achieving, on a continuing basis, the optimum yield from each fishery*"; Under required provisions, the Magnuson-Stevens Fishery Conservation and Management Act states that "*Any fishery management plan… shall… contain the conservation and management measures… necessary…to… promote the long-term health and stability of the fishery;*" National Standard 1 Guidelines states that: "*To the extent possible, the relevant*	Accountability measures and rebuilding plans are enacted to protect and restore stocks for future use. Take reduction plans for marine mammals are developed and implemented. Recovery plans for endangered and threatened species are developed and implemented. Environmental impact statements and environmental assessments mandated by National Environmental Policy Act are prepared and delivered.	Long term sustainability of the resources is at the heart of the Magnuson-Stevens Fishery Conservation and Management Act. The relative importance of long term resource sustainability vs community sustainability has been settled in Natural Resources Defense Council v. Daley, 209 F.3d 747 (D.C. Cir. 2000), where the court ruled that National Standard One (prevent overfishing/achieve optimum yield on a continuing basis) takes precedent over National Standard Eight (economic/ community considerations) The clear priority of conservation (long term sustainability of the resource) over short term-economic interests under the MSA was clarified in at least two subsequent suits filed by the Natural Resources Defense Council (Dorsett et al., 2013).

	social, economic, and ecological factors used to establish (Optimum Yield) for a stock, stock complex, or fishery should be quantified and reviewed in historical, short-term, and long-term contexts." The Marine Mammal Protection Act states that "*The long-term goal of the (take reduction) plan shall be to reduce, within 5 years of its implementation, the incidental mortality or serious injury of marine mammals incidentally taken in the course of commercial fishing operations to insignificant levels*" The Endangered Species Act states that "*The Secretary … shall … incorporate in each (recovery) plan … a description of such site-specific management actions as may be necessary to achieve the plan's goal for the conservation and survival of the species*;" The National Environmental Policy Act requires federal entities to "*include in every recommendation or report on proposals for legislation and other major Federal actions … the relationship between*		

	local short-term uses of man's environment and the maintenance and enhancement of long-term productivity…"		

Topic of pertinence # 16 (29.5): **Framework for fisheries at local, national or regional level**			
Type of evidence	**Internal**	**Outcome**	**Independent**
Symbol rating	●	●	●
Description	The Magnuson-Stevens Fishery Conservation and Management Act has established "*Regional Fishery Management Councils… Each Council shall reflect the expertise and interest of the several constituent States in the ocean area over which such Council is granted authority"* The Marine Mammal Protection Act states that "*for a strategic stock … the Secretary may … establish a take reduction team … Members shall include representatives of Federal agencies, each coastal State which has fisheries which interact with the species or stock, (etc.)*…"	Regional fishery management councils have been established. NOAA Fisheries established regional science and management offices. Take reduction teams for marine mammals have been established.	Councils meet publicly, and meetings are open for public participation. Most Council meetings as well as some advisory panel meetings are also streamed and/or archived online. Thus, any member of the public can be an independent verifier that legal and administrative frameworks for U.S. federal fisheries are established.

Topic of pertinence # 17 (29.5; 31.1): **Compliance ensured via monitoring and enforcement**			
Type of evidence	**Internal**	**Outcome**	**Independent**
Symbol rating	●	◒	◒
Description	The Magnuson-Stevens Fishery Conservation and Management Act (and the Marine Mammal Protection Act has similar language) state on enforcement that "*The provisions of this Act shall be enforced by the Secretary and the Secretary of the department in which the Coast Guard is operating. Such Secretaries may… utilize the personnel, services, equipment (including aircraft and vessels), and facilities of any other Federal agency, including all elements of the Department of Defense, and of any State agency, in the performance of such duties*" National Standard 1 Guidelines state that "*The Secretary has an obligation to implement and enforce the (Fishery Management Plan).*" CFR 15-IX-905.3 states that "*Information collected by a voluntary fishery data collector…Is subject to discovery by any party to an enforcement*	The monitoring and control system includes observers and at-sea monitors, logbooks, vessel trip reports, catch reports, permits, and trip tickets, vessel boardings (by Coast Guard and/or NOAA Fisheries Office of Law Enforcement) and vessel monitoring systems.	King and Sutinen (2010) argue that "*The deterrence effect of the existing enforcement system in the Northeast multispecies groundfish fishery is weak because economic gains from violating fishing regulations are nearly 5 times the economic value of expected penalties" and they conclude that "noncompliance is a significant problem (in this) fishery, as it has been for at least 20 years.*" I agree with this view, but this may be specific to the Northeast. In Alaska there is complete observer coverage (sometimes 2 observers per boat) on the larger vessels and there, as well as in the Pacific and North Pacific areas there appears to be a culture of following the fisheries management regulations. In the southeast and in the Gulf of Mexico where recreational fisheries can represent a large share of the catch, monitoring, control and surveillance

	proceeding…" CFR 50-II-216.8 states that "*Enforcement Agents of the National Marine Fisheries Service shall enforce the provisions of the MMPA and may take any actions authorized by the MMPA with respect to enforcement."*		presents particular challenges.

Topic of pertinence # 18 (30; 30.1): **Stock is not overfished**			
Type of evidence	**Internal**	**Outcome**	**Independent**
Symbol rating	●	●	●
Description	A stock or stock complex is considered "overfished" when its biomass has declined below the biomass that jeopardizes the capacity of the stock or stock complex to produce (Maximum Sustainable Yield) on a continuing basis. This definition has been used for more than 10 years and is consistent with the interpretation of the FAO Guidelines. The Endangered Species Act states that "*The Secretary shall… determine whether any species is an endangered species or a threatened species because of… overutilization for commercial, recreational, scientific, or educational purposes;"*	The USA has a good system for monitoring progress on the status of stocks with its Fish Stock Sustainability Index and Status of Stocks report to Congress.	Using the number of stocks that are "overfished" is not necessarily the best metric to measure the success of the fisheries management system. The management system may make the correct decisions and be successful in reducing fishing mortality, but it is not necessarily the case that stock biomass will increase and that the stock will no longer be overfished. A recent NRC study (Evaluating the Effectiveness of Fish Stock Rebuilding Plans in the United States) found that of the 55 stocks that were under recovery plans at the end of the 1990s, 19 were not subject to overfishing. Of those 36 stocks that were subject to overfishing, 23 are no longer subjected to overfishing. Of those same 55 stocks under recovery plans at the end of the 1990s, 20 were not overfished. Of the 35 that were overfished, 10 are no longer overfished, 5 are on their way to being not overfished. Of the 20 stocks that

			are overfished and that are not showing signs of recovery, 11 are not subject to overfishing.

Topic of pertinence # 19 (30): **Long-term changes in productivity considered**			
Type of evidence	**Internal**	**Outcome**	**Independent**
Symbol rating	●	◒	◒
Description	The Magnuson-Stevens Fishery Conservation and Management Act states that "*For a fishery that is overfished, any fishery management plan, amendment, or proposed regulations for such fishery shall—…specify a time period for rebuilding the fishery that shall—…not exceed 10 years, except in cases where the biology of the stock of fish, other environmental conditions, or management measures … dictate otherwise;*" The last part of the statement can be interpreted as allowing for longer rebuilding periods when long term changes in productivity have been identified.	Some rebuilding plans allow for longer rebuilding periods but this is generally justified by the biology of the (long lived) species rather than changes in long term productivity. By definition relatively long time series of observation are required before long term changes in productivity can be reliably confirmed.	Given the open nature of the fisheries management process in the US, the public itself can independently review and provide comments to Councils regarding specifying rebuilding periods based on long-term changes in productivity in fishery management plans before approval by the Secretary of Commerce. However, the main basis for decision making is the "best available science" and public comments are not interpreted as "best available science". Several stocks in the Northeast (cod, mackerel, hakes) seem to have suffered decreases in productivity, possibly due to increased predation. These increased natural mortality rates are only now beginning to be taken into account in scientific advice.

Topic of pertinence # 20 (30; 31.1): **Restoration of stocks required within reasonable timeframes**			
Type of evidence	**Internal**	**Outcome**	**Independent**
Symbol rating	●	●	●
Description	The Magnuson-Stevens Fishery Conservation and Management Act states that "*The term "conservation and management" refers to all of the rules, regulations, conditions, methods, and other measures… to rebuild, restore, or maintain… any fishery resource and the marine environment"; "For a fishery that is overfished, any fishery management plan, amendment, or proposed regulations… shall—…specify a time period for rebuilding the fishery that shall—…be as short as possible…(but) not exceed 10 years, except in cases where the biology of the stock of fish, other environmental conditions, or management measures… dictate otherwise;*" The Marine Mammal Protection Act states that "*… the plan shall include measures the Secretary expects will reduce, within 6 months of the plan's implementation, such*	Rebuilding plans specify the timeframes for rebuilding fish stocks. Recovery plans for ESA-listed species also include specific timeframes as do take reduction plans for marine mammals. Since 2000, 34 federally managed U.S. stocks have been rebuilt (NOAA, 2014b).	The rebuilding timeframes in the US fisheries management system are entirely compatible with the FAO Guidelines. However, as indicated above for "overfished" vs "overfishing", short rebuilding timeframes in terms of biomass is not necessarily the best measure of the success of the management system. A recent NRC study (Evaluating the Effectiveness of Fish Stock Rebuilding Plans in the United States) suggests that early reductions in fishing mortality could reduce the need for rebuilding plans. When rebuilding plans are necessary, reducing F and maintaining low F would be preferable to insist in rebuilding biomass when environmental or ecological conditions make rebuilding unlikely.

	mortality and serious injury to a level below the potential biological removal level." The Endangered Species Act states that "*The Secretary shall develop and implement (recovery) plans… for the conservation and survival of endangered species and threatened species listed… (and) incorporate in each plan—… estimates of the time required and the cost to carry out those measures…*"		

Topic of pertinence # 21 (30.3): **Stock structure contributing to resilience considered**			
Type of evidence	**Internal**	**Outcome**	**Independent**
Symbol rating	◒	◒	◒
Description	National Standard 2 Guidelines state that: "*The (Stock Assessment and Fishery Evaluation) report provides information to the Councils for determining annual harvest levels from each stock, documenting significant trends or changes in the resource, marine ecosystems, and fishery over time, and assessing the relative success of existing state and Federal fishery management programs.*" This does not cover the intent of the FAO Guidelines and it would have been preferable to use the full FAO paragraph as topic of pertinence: "The structure and composition of the "stock under consideration" which contribute to its resilience are taken into account. This is discussed further in the "Independent" column.	Stock Assessment and Fishery Evaluation (SAFE) reports may or not cover this aspect.	This paragraph in the FAO Guidelines has two components, one dealing with the stock structure (# of spawning components) and the other dealing with a balanced age structure with sufficient numbers of older larger individuals. Neither seems to be addressed directly in the rules and regulations, although the Magnuson-Stevens Fishery Conservation and Management Act says that " *To the extent practicable, an individual stock of fish shall be managed as a unit throughout its range, and interrelated stocks of fish shall be managed as a unit or in close coordination*". In addition, several assessments do take into account the balanced age structure component of the FAO Guidelines. The attitude regarding stock structure varies regionally. This is seen as very important in the Northeast where great efforts have been invested in stock identification,

			including sub-stock identification. In the Pacific and in the Southeast, stock structure seems to be less important, and sometimes stock boundaries seem to correspond more to political boundaries than biological ones.

Topic of pertinence # 22 (30.4; 31.4): **Generic evidence based on similar stock situations is used**			
Type of evidence	**Internal**	**Outcome**	**Independent**
Symbol rating	●	●	●
Description	The Magnuson-Stevens Fishery Conservation and Management Act states that "*To the extent practicable, an individual stock of fish shall be managed as a unit throughout its range, and interrelated stocks of fish shall be managed as a unit or in close coordination.*" National Standard 1 Guidelines states that "*An indicator stock is a stock with measurable status determination criteria that can be used to help manage and evaluate more poorly known stocks that are in a stock complex. If an indicator stock is used to evaluate the status of a complex, it should be representative of the typical status of each stock within the complex, due to similarity in vulnerability.*"	The justification for considering a stock as a complex or for assessing a stock via an indicator stock is explained in the fishery management plan.	Fishery management plans, plan amendments, and framework actions, are considered public policy; so any management measure within them must undergo public comment procedures before decision-making, as dictated by the Administrative Procedures Act. Thus, the public itself can independently review and provide comments to Councils regarding use of generic evidence in fishery management plans before approval by the Secretary of Commerce. I am not personally familiar with cases where generic evidence has been used.

Topic of pertinence # 23 (31.1): **Non-target catch and discards not threatened by target fishery**			
Type of evidence	**Internal**	**Outcome**	**Independent**
Symbol rating	●	●	●
Description	The Magnuson-Stevens Fishery Conservation and Management Act requires that "*Conservation and management measures shall, to the extent practicable, (A) minimize bycatch and (B) to the extent bycatch cannot be avoided, minimize the mortality of such bycatch*"; and to "*establish a standardized reporting methodology to assess the amount and type of bycatch occurring in the fishery*"; National Standard 9 Guidelines also require to "*determine the amount, type, disposition, and other characteristics of bycatch and bycatch mortality…*" Other applicable laws, such as the MMPA, the ESA, and the Migratory Bird Treaty Act, require that Councils consider the impact of conservation and management measures on living marine resources other than fish; i.e., marine mammals and birds.	Several means are used to monitor the catch and by-catch, including observers, logbooks, vessel trip reports, catch reports and trip tickets, dealer, landing, and production reports, protected resource stranding and entanglement reports. Measures to control by-catch include time and area closures, catch share management, gear and bait restrictions and modifications. Results are recorded in U.S. National Bycatch Report. Improvements are sought through a Bycatch Reduction Engineering Program	The US legislation and management processes are exemplary in the management of Endangered, Threatened and Protected species. There have been problems in the past for commercial species being overharvested in multispecies fisheries, but management has tightened and several of those have become "choke" species limiting the ability to catch the full potential of more abundant species.

	The Marine Mammal Protection Act states that "*If…the level of incidental mortality or serious injury from commercial fisheries … is likely to result in an impact that is more than negligible on the endangered or threatened species or stock, the Secretary shall use the emergency authority … to protect such species or stock…*" The Endangered Species Act states that "*The term "take" means to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct"; "…with respect to any endangered species of fish or wildlife…it is unlawful…to… take any such species…*" The Migratory Bird Treaty Act states that"*…it shall be unlawful at any time, by any means or in any manner, to … take, capture, kill, attempt to take, capture, or kill, possess… any migratory bird…*"		

Topic of pertinence # 24 (31.3): **Knowledge of the essential habitats for the "stock under consideration" exists**			
Type of evidence	**Internal**	**Outcome**	**Independent**
Symbol rating	●	●	●
Description	In the Magnuson-Stevens Fishery Conservation and Management Act "*The term "essential fish habitat" means those waters and substrate necessary to fish for spawning, breeding, feeding or growth to maturity*". Further the Act requires that "*Any fishery management… shall—…describe and identify essential fish habitat for the fishery"; " …The Secretary shall… establish by regulation guidelines to assist the Councils in the description and identification of essential fish habitat in fishery management plans (including adverse impacts on such habitat)…*" CFR 50-VI-600.815 states that "*(Fishery Management Plans) must describe and identify (Essential Fish Habitat) for each life stage of the managed species… should explain the physical, biological, and chemical characteristics … (and) identify the specific geographic*	Regional fishery management councils generally have a habitat committee. Fisheries management plans have sections on essential fish habitat.	In 2004, the Center for Independent Experts reviewed NOAA Fisheries evaluation of fishing activities that may adversely affect essential fish habitat in the Alaska Region, and in part, reviewed what NOAA described as essential fish habitat (CIE, 2004). Environmental NGOs are closely involved in most regional fishery management councils ensuring that habitat considerations are duly taken into account. The US management system is open and transparent. The general public has several opportunities to independently review and provide comments to Councils regarding essential fish habitat in fishery management plans before approval by the Secretary of Commerce.

	location or extent of habitats…" In the Endangered Species Act "*The term "critical habitat" for a threatened or endangered species means—…the specific areas within the geographical area occupied by the species…on which are found those physical or biological features (I) essential to the conservation of the species and (II) which may require special management considerations or protection"; "The Secretary… shall, concurrently with making a determination…that a species is an endangered species or a threatened species, designate any habitat of such species which is then considered to be critical habitat*"		

References

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2. Rate U.S. federal fishery management via the symbol system described in Framework Assessment of Sustainability.

The tables above cover ToR 1 and 2.

3. Provide future considerations on how the U.S. federal marine fishery management system may mitigate gaps or weaknesses in conformance (as per the reviewer's rating).

I have included here comments on some, but not all, future considerations in the Comparative Analysis. In my view, several comments put into the Future Considerations sections are not relevant to the performance of the US fishery management system with respect to the FAO Guidelines on Ecolabelling. If time had permitted, I would have been happy to comment on all of those, but unfortunately, time was very short considering the scope of this review.

Some of the comments, e.g. on page 52 of the Comparative Evaluation, are useful in a general sense, but not specifically in the context of evaluating the conformance of the US fishery management system with the FAO Guidelines; for example, the comment on biodiversity, page 65, goes beyond the requirements of the FAO Guidelines. The comment on page 73 on facilitating access to small-scale operators is a resource allocation issue that is not covered in the FAO Guidelines. I agree with the comment on cooperative research on pages 95-96. Cooperative research has the potential to improve the quality of the data, but also acceptance of the assessment results and of the scientific advice. The comment on recreational fisheries on page 124 is not relevant - in the USA, the intent is that all fisheries and all sources of mortality are included in the assessment and in the management process. The comment on MSY on the same page is more relevant and related to my comments on the use of conservative proxies. I agree with the comment on page 171 that the terminology defining stock status could be clarified so as to minimize confusion to the general public. Stocks in a depleted condition are designated to be in an overfished condition even if overfishing was not the primary cause of the depletion.

4. Compile ratings for all 24 Topics of Pertinence into one summary sheet (as described by Table 1 template in Framework Assessment of Sustainability).

I have not been able to complete the table with the symbols as requested. Instead I have used 1 for the solid circle, 2 for the half solid circle and 3 for the open circle (no instances).

Topic #	Topic Description	Int	Out	Ind
1	Management system in compliance with relevant local, national and international laws	1	1	1
2	There are documented management approaches for the "stock under consideration".	1	1	1

3	Uncertainty taken into account via risk assessment or precautionary approach	1	1	1
4	Ecosystem effects of fishing are assessed and adverse effects addressed	1	1	1
5	Types an scales of fisheries considered in management	1	1	1
6	Adequate/reliable data are collected, maintained and assessed	1	2	2
7	Traditional, fisher or community knowledge considered	1	2	2
8	Best scientific evidence used in management measures	1	1	1
9	Total fishing mortality from all sources considered for the "stock under consideration"	1	1	1
10	Maximum sustainable yield or proxy used for management targets	1	1	1
11	Optimal utilization promoted in management	1	2	2
12	Food-web ecosystem considerations taken into account	1	1	1
13	Management should specify limits or directions in key performance indicators, e.g. Overfishing	1	1	1
14	Actions taken if limits approached or exceeded	1	1	1
15	Goal of long-term sustainability present	1	1	1
16	Framework for fisheries at local, national or regional level	1	1	1
17	Compliance ensured via monitoring and enforcement	1	2	2
18	Stock is not overfished	1	1	1
19	Long-term changes in productivity considered	1	2	2
20	Restoration of stocks required within reasonable timeframes	1	1	1
21	Stock structure contributing to resilience considered	2	2	2
22	Generic evidence based on similar stock situations	1	1	1
23	Non-target catch and discards not threatened by target fishery	1	1	1
24	Knowledge of the essential habitats for "stocks under consideration"	1	1	1

5. After completing the conformance assessment of the U.S. federal marine fishery management system, provide suggestions on refining the methodological processes described in Framework Assessment of Sustainability.

The framework itself is relatively straightforward and closely linked to the FAO Guidelines for Ecolabelling. The comparative analysis would be simpler to use if organized by topic of pertinence rather than the paragraphs of the FAO Guidelines. Where possible, URL's to specific portions of relevant documents and web sites could be included in the comparative analysis to avoid paraphrasing the source document.

Conclusions and Recommendations in accordance with the ToRs.

The conclusions and recommendations are the same as the Executive Summary.

The management of US fisheries is not perfect. But in the context of the FAO Guidelines for Ecolabelling, it meets by and large most of the criteria. This is not only a reflection of the role the USA played in developing the guidelines, but it is also a testimony to the balanced involvement of industry and environmental NGOs in the policy development and implementation of fisheries management in the USA.

The collection of adequate / reliable data, however, is one area where the USA fisheries management has lagged in some areas. The Northeast has been exemplary in the collection of fishery independent data, while the Northwest and Alaska, since extension of jurisdiction have been exemplary in the collection of fishery dependent data. Both regions are making progress on their weaknesses, but the Northwest and Alaska seem to be progressing more quickly on improving the collection of fishery independent data than the northeast is in the collection of fishery dependent data.

The southern areas are also making progress in both areas, but data collection programs designed for large scale commercial fisheries may not be appropriate for areas where small scale commercial and recreational fisheries dominate.

Appendix 1: Bibliography of materials provided for review

Two documents were provided for review. The second document turned out to be different than indicated in the SoW, it was a 258 pages Comparative Analysis Of U.S. Federal Fishery Management To The FAO Ecolabelling Guidelines: A Self-Assessment.

1. Framework Assessment of Sustainability: Methodology for Evaluating the Conformance of Fishery Management Systems to FAO's Guidelines for Ecolabelling (~35 pp).
2. Examples of U.S. federal fishery management statutes and regulations relevant to addressing biological sustainability as outlined in the "Minimum Substantive Requirements" of the FAO's Guidelines for the Ecolabelling of Fish and Fishery Products from Marine Capture Fisheries. (~70 pp).

Appendix 2: A copy of the CIE Statement of Work

Statement of Work for Dr. Jean-Jacques Maguire

External Independent Peer Review by the Center for Independent Experts

COMPARATIVE ANALYSIS OF U.S. FEDERAL FISHERY MANAGEMENT TO THE FAO ECOLABELLING GUIDELINES

Scope of Work and CIE Process: The National Marine Fisheries Service's (NMFS) Office of Science and Technology coordinates and manages a contract providing external expertise through the Center for Independent Experts (CIE) to conduct independent peer reviews of NMFS scientific projects. The Statement of Work (SoW) described herein was established by the NMFS Project Contact and Contracting Officer's Technical Representative (COTR), and reviewed by CIE for compliance with their policy for providing independent expertise that can provide impartial and independent peer review without conflicts of interest. CIE reviewers are selected by the CIE Steering Committee and CIE Coordination Team to conduct the independent peer review of NMFS science in compliance the predetermined Terms of Reference (ToRs) of the peer review. Each CIE reviewer is contracted to deliver an independent peer review report to be approved by the CIE Steering Committee and the report is to be formatted with content requirements as specified in **Annex 1**. This SoW describes the work tasks and deliverables of the CIE reviewer for conducting an independent peer review of the following NMFS project. Further information on the CIE process can be obtained from www.ciereviews.org.

Project Description:

NMFS has developed a methodology to assess the sustainability of a fishery management system and has applied the methodology to U.S. federal marine fishery management. CIE reviewers would conduct an independent assessment of the U.S. federal marine fishery management system using the methodology provided. This assessment can act as a tool for NMFS to systematically document, communicate, and guide the sustainable management of U.S. federal fisheries. NMFS leadership believes that an independent assessment would be valuable for describing evidence of conformance between U.S. fishery intentions and performance, and the FAO Ecolabelling Guidelines. The Terms of Reference (ToRs) of the peer review are attached in **Annex 2**.

Requirements for CIE Reviewers: Three CIE reviewers shall conduct an impartial and independent peer review in accordance with the SoW and ToRs herein. CIE reviewers shall have working knowledge and recent experience in the application of fisheries management and/or stock assessment science, particularly with knowledge of the U.S. federal marine fishery management system (i.e., via NOAA and the Regional Fishery Management Councils) and associated legislation/regulation (i.e., the Magnuson–Stevens Fishery Conservation and Management Act, the Marine Mammal Protection Act, the

Endangered Species Act, etc.). Each CIE reviewer's duties shall not exceed a maximum of 10 days to complete all work tasks of the peer review described herein.

Location of Peer Review: Each CIE reviewer shall conduct an independent peer review as a desk review, therefore no travel is required.

Statement of Tasks: Each CIE reviewers shall complete the following tasks in accordance with the SoW and Schedule of Milestones and Deliverables herein.

Prior to the Peer Review: Upon completion of the CIE reviewer selection by the CIE Steering Committee, the CIE shall provide the CIE reviewer information (full name, title, affiliation, country, address, email) to the COTR, who forwards this information to the NMFS Project Contact no later the date specified in the Schedule of Milestones and Deliverables. The CIE is responsible for providing the SoW and ToRs to the CIE reviewers. The NMFS Project Contact is responsible for providing the CIE reviewers with the background documents, reports, and other pertinent information. Any changes to the SoW or ToRs must be made through the COTR prior to the commencement of the peer review.

Pre-review Background Documents: Two weeks before the peer review, the NMFS Project Contact will send (by electronic mail or make available at an FTP site) to the CIE reviewers the necessary background information and reports for the peer review. In the case where the documents need to be mailed, the NMFS Project Contact will consult with the CIE Lead Coordinator on where to send documents. CIE reviewers are responsible only for the pre-review documents that are delivered to the reviewer in accordance to the SoW scheduled deadlines specified herein. The CIE reviewers shall read the following documents in preparation for the peer review.

1. *Framework Assessment of Sustainability: Methodology for Evaluating the Conformance of Fishery Management Systems to FAO's Guidelines for Ecolabelling* (~35 pp).
2. Examples of U.S. federal fishery management statutes and regulations relevant to addressing biological sustainability as outlined in the "Minimum Substantive Requirements" of the FAO's *Guidelines for the Ecolabelling of Fish and Fishery Products from Marine Capture Fisheries.* (~70 pp).

Desk Review: Each CIE reviewer shall conduct the independent peer review in accordance with the SoW and ToRs, and shall not serve in any other role unless specified herein. **Modifications to the SoW and ToRs can not be made during the peer review, and any SoW or ToRs modifications prior to the peer review shall be approved by the COTR and CIE Lead Coordinator.** The CIE Lead Coordinator can contact the Project Contact to confirm any peer review arrangements.

Contract Deliverables - Independent CIE Peer Review Reports: Each CIE reviewer shall complete an independent peer review report in accordance with the SoW. Each CIE reviewer shall complete the independent peer review according to required format and

content as described in Annex 1. Each CIE reviewer shall complete the independent peer review addressing each ToR as described in Annex 2.

Specific Tasks for CIE Reviewers: The following chronological list of tasks shall be completed by each CIE reviewer in a timely manner as specified in the **Schedule of Milestones and Deliverables**.

1) Conduct necessary pre-review preparations, including the review of background material and reports provided by the NMFS Project Contact in advance of the peer review.
2) Conduct an independent peer review in accordance with the ToRs (**Annex 2**).
3) No later than REPORT SUBMISSION DATE, each CIE reviewer shall submit an independent peer review report addressed to the "Center for Independent Experts," and sent to Mr. Manoj Shivlani, CIE Lead Coordinator, via email to shivlanim@bellsouth.net, and Dr. David Sampson, CIE Regional Coordinator, via email to *david.sampson@oregonstate.*. Each CIE report shall be written using the format and content requirements specified in Annex 1, and address each ToR in **Annex 2**.

Schedule of Milestones and Deliverables: CIE shall complete the tasks and deliverables described in this SoW in accordance with the following schedule.

August 1, 2014	CIE sends reviewer contact information to the COTR, who then sends this to the NMFS Project Contact
September 24, 2014	NMFS Project Contact sends the CIE Reviewers the report and background documents
September 24 – October 8, 2014	Each reviewer conducts an independent peer review as a desk review
September 8, 2014	CIE reviewers submit draft CIE independent peer review reports to the CIE Lead Coordinator and CIE Regional Coordinator
October 17, 2014	CIE submits the CIE independent peer review reports to the COTR
October 24, 2014	The COTR distributes the final CIE reports to the NMFS Project Contact and the Office of Sustainable Fisheries

Modifications to the Statement of Work: This 'Time and Materials' task order may require an update or modification due to possible changes to the terms of reference or schedule of milestones resulting from the fishery management decision process of the NOAA Leadership, Fishery Management Council, and Council's SSC advisory committee. A request to modify this SoW must be approved by the Contracting Officer

at least 15 working days prior to making any permanent changes. The Contracting Officer will notify the COTR within 10 working days after receipt of all required information of the decision on changes. The COTR can approve changes to the milestone dates, list of pre-review documents, and ToRs within the SoW as long as the role and ability of the CIE reviewers to complete the deliverable in accordance with the SoW is not adversely impacted. The SoW and ToRs shall not be changed once the peer review has begun.

Acceptance of Deliverables: Upon review and acceptance of the CIE independent peer review reports by the CIE Lead Coordinator, Regional Coordinator, and Steering Committee, these reports shall be sent to the COTR for final approval as contract deliverables based on compliance with the SoW and ToRs. As specified in the Schedule of Milestones and Deliverables, the CIE shall send via e-mail the contract deliverables (CIE independent peer review reports) to the COTR (William Michaels, via William.Michaels@noaa.gov).

Modifications to the Statement of Work: This 'Time and Materials' task order may require an update or modification due to possible changes to the terms of reference or schedule of milestones resulting from the fishery management decision process of the NOAA Leadership, Fishery Management Council, and Council's SSC advisory committee. A request to modify this SoW must be approved by the Contracting Officer at least 15 working days prior to making any permanent changes. The Contracting Officer will notify the COTR within 10 working days after receipt of all required information of the decision on changes. The COTR can approve changes to the milestone dates, list of pre-review documents, and ToRs within the SoW as long as the role and ability of the CIE reviewers to complete the deliverable in accordance with the SoW is not adversely impacted. The SoW and ToRs shall not be changed once the peer review has begun.

Acceptance of Deliverables: Upon review and acceptance of the CIE independent peer review reports by the CIE Lead Coordinator, Regional Coordinator, and Steering Committee, these reports shall be sent to the COTR for final approval as contract deliverables based on compliance with the SoW and ToRs. As specified in the Schedule of Milestones and Deliverables, the CIE shall send via e-mail the contract deliverables (CIE independent peer review reports) to the COTR (William Michaels, via William.Michaels@noaa.gov).

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Annex 1: Format and Contents of CIE Independent Peer Review Report

1. The CIE independent report shall be prefaced with an Executive Summary providing a concise summary of the findings and recommendations, and specify whether the science reviewed is the best scientific information available.

2. The main body of the reviewer report shall consist of a Background, Description of the Individual Reviewer's Role in the Review Activities, Summary of Findings for each ToR in which the weaknesses and strengths are described, and Conclusions and Recommendations in accordance with the ToRs.

3. The reviewer report shall include the following appendices:

   Appendix 1: Bibliography of materials provided for review
   Appendix 2: A copy of the CIE Statement of Work

Annex 2: Tentative Terms of Reference for the Peer Review

COMPARATIVE ANALYSIS OF U.S. FEDERAL FISHERY MANAGEMENT TO THE FAO ECOLABELLING GUIDELINES

Background

The National Oceanic and Atmospheric Administration (NOAA) Fisheries Service and many U.S. fishing industry groups believe that U.S. fisheries are sustainably managed under the strict mandates of the Magnuson-Stevens Fishery Conservation and Management Act, the Marine Mammal Protection Act, and the Endangered Species Act; however, U.S. consumers hear conflicting messages about the sustainability of U.S. seafood. This assessment will illustrate conformance between the NOAA Fisheries management system and internationally-accepted guidelines for sustainability adopted by the Food and Agriculture Organization of the United Nations (FAO).

The methodology, co-developed by NOAA Fisheries, is based on the 2010 FAO *Draft Evaluation Framework to Assess the Conformity of Public and Private Ecolabelling Schemes with the FAO Guidelines for the Ecolabelling of Fish and Fishery Products from Marine Capture Fisheries*, which provides benchmarking indicators to validate fishery management systems' conformity with the 2009 United Nations FAO *Guidelines for Ecolabelling of Fish and Fishery Products from Marine Capture Fisheries* (Ecolabelling Guidelines).

Objective

Conduct a conformance assessment of the U.S. federal marine fishery management system (i.e., via NOAA Fisheries and the Regional Fishery Management Councils) using the methodology described in *Framework Assessment of Sustainability: Methodology for Evaluating the Conformance of Fishery Management Systems to FAO's Guidelines for Ecolabelling*.

Outputs

To this end, CIE reviewers will apply the methodology described in *Framework Assessment of Sustainability: Methodology for Evaluating the Conformance of Fishery Management Systems to FAO's Guidelines for Ecolabelling* to assess conformance of the U.S. federal marine fishery management system to each of 25 Topics of Pertinence, i.e. -

For each Topic of Pertinence:

1. Generate a table (as described by Table 3 in *Framework Assessment of Sustainability*) documenting evidence of intention, performance, and independent verification of U.S. federal marine fishery management conformance.
    i. In assessing intentions (i.e., internal evidence), the document of example statutes and regulations provided (in the pre-review background documents) may serve as the basis for conformance evidence. Additional legislative and regulatory evidence may also be provided per the reviewer's knowledge and expertise.

ii. In assessing performance (i.e., outcome evidence) and independent verification (i.e., independent evidence), examples shall be derived from the reviewer's knowledge and expertise of the U.S. federal marine fishery management system.

2. Rate U.S. federal fishery management via the symbol system described in *Framework Assessment of Sustainability*.
3. Provide future considerations on how the U.S. federal marine fishery management system may mitigate gaps or weaknesses in conformance (as per the reviewer's rating).

Overall:

4. Compile ratings for all 25 Topics of Pertinence into one summary sheet (as described by Table 1 template in *Framework Assessment of Sustainability*).
5. After completing the conformance assessment of the U.S. federal marine fishery management system, provide suggestions on refining the methodological processes described in *Framework Assessment of Sustainability.*